SIEMENS

MammoReport^{Plus}

SP

Planning Guide

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System configuration

Remarks

- A note must be made on all room plans that are created by the Planning Departments which makes reference to the General Installation and Delivery Conditions of Siemens Medical Engineering. A copy of the General Installation and Delivery Conditions must accompany the plans when they are handed over to the customer.
- When planning the space, the documents which apply for the specific fire safety technical regulations must be observed.
- Unless otherwise stated, all dimensions are in mm.
- Room lighting:
  For the constancy test according to DIN 6868-57, it must be possible to dim the lighting in rooms in which diagnostics is made on image display devices (monitors).
  For the constancy test, it is also required that the value documented in the acceptance test must be exactly reproducible.
  According to DIN 6868-57 (the international standard is still in preparation) the lighting in rooms where diagnosis is performed using image display devices (monitors) must meet the following requirements:

  - Adjustable, glare-free and reproducible setting of illuminance (e.g. dimmer with scale),

  - No reflections from windows, lamps and viewing boxes when the monitors are in their standard operating position.

Safety

The product-specific safety information contained in this document, as well as the general safety information must be observed.

NOTICE	**Be aware that this product is intended to be used in a non-patient environment.**

Requirements

It is very important that the customer is well prepared for the installation of the MammoReport^{Plus} system. In order for the MammoReport^{Plus} system to work as intended, an archive or printer solution is needed. Also make sure to complete the forms in this document as thoroughly as possible, and keep them available for the installation to facilitate the procedure.

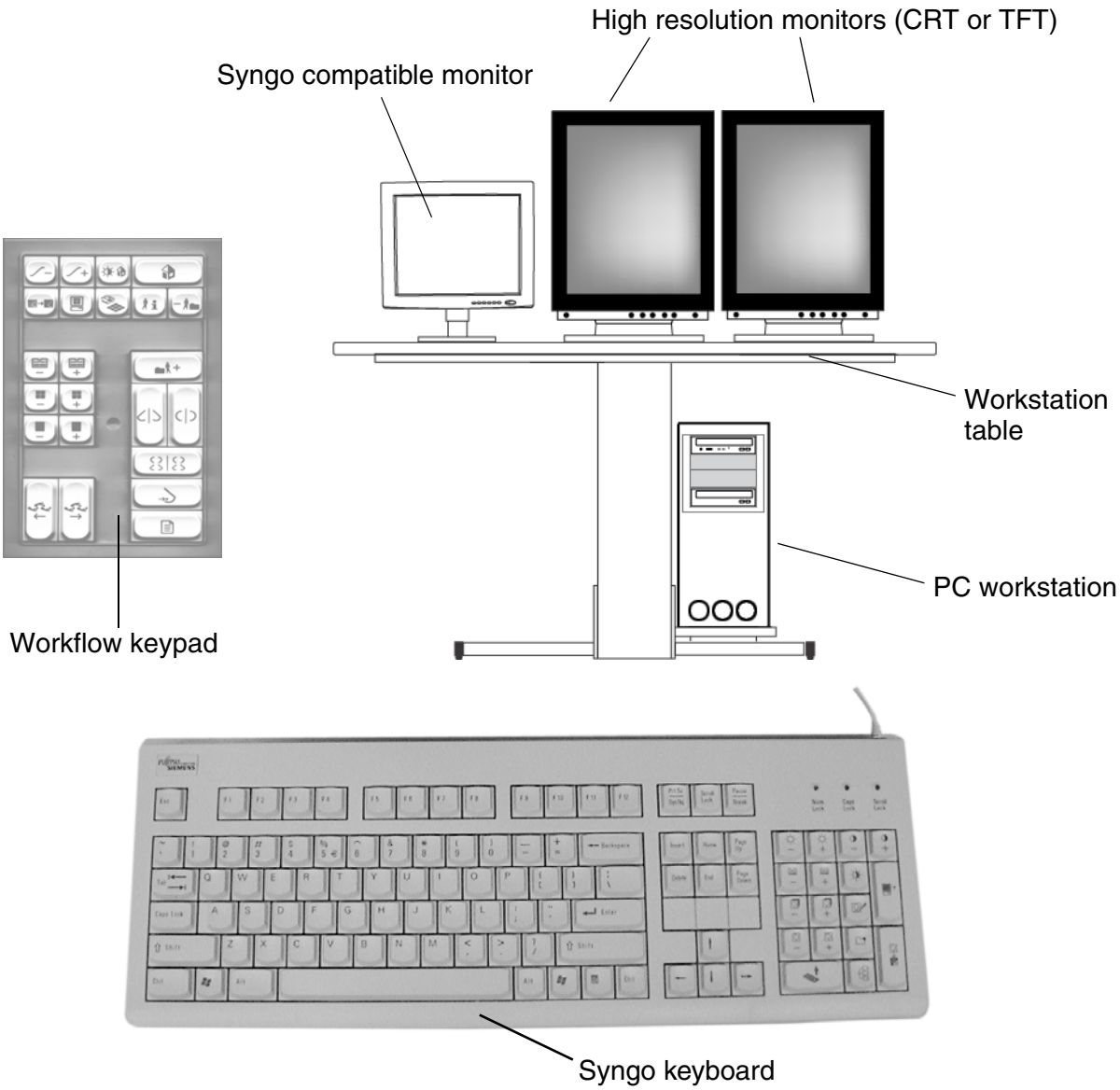
NOTICE	**VERY IMPORTANT NOTICE!** **To enable monitor calibration according to the DIN6868-57 standard, SIEMENS strongly recommends that the SMfit ACT monitor calibration tools are purchased (including spot meter).** **The DIN6868 Plug-in which is also required is not included in SMfit ACT - it is available with costs for the customer.** **Instructions on how to perform quality control and calibrations using the SMfit ACT tool are described in the Quality Control Manual for MammoReport^{Plus}.**

System overview

The MammoReport^{Plus} system's major parts are:

- 2 displays
  - Either high resolution monitors - SIMOMED SMM21201P (CRT)
  - or TFT monitors (DSB 2103-D-5MP) or (Barco MFGD 5621 HD)
- PC workstation
- Workflow keypad
- Syngo compatible monitor
- Syngo keyboard
- MammoReport^{Plus} software
- Windows XP compatible printer, provided by the customer

NOTICE	**The customer must provide a printer to be able to print reports.**



Additional options for the MammoReport^{Plus} system are:

- 1 x 147 GB hard disks

NOTE	**For actual system options, see price book.**

NOTE	**The side table has to be provided by the customer.** **If the workstation station table (option) is not ordered, the table must be provided by the customer.**

Network

The MammoReport^{Plus} workstation supports the TCP / IP protocol. Due to the data throughput that is required, we urgently recommend the use of a 100 Mb/s switched network or better. Please note that any required network cabling, as well as the required connector outlets must be available on site. If necessary, an outside service contractor must be brought on site.

Software installation

The MammoReport^{Plus} workstation is shipped with the softcopy reading software pre-installed, but will need customer specific settings configured.

Software configuration

The configuration of the MammoReport^{Plus} workstation software requires approximately 2 hours.

Hardware configuration

The configuration of the MammoReport^{Plus} workstation hardware, monitor calibration etc., requires approximately 2 hours.

Acronyms and abbreviations

AE Title (AET)	DICOM Application Entity Title. Must be unique in a DICOM network.
AWS	Acquisition workstation.
Conformance	Each manufacture of a DICOM device has to provide such a statement which gives an overview of the products DICOM capability.
CR	Computed Radiography IOD, e.g. used by the DIGISCAN M.
DICOM	Digital Imaging and Communication in Medicine.
DHCP	Dynamic Host Configuration Protocol. Reduces the complexity of configuring computers for TCP/IP networks. The following TCP/IP configuration can be dynamically assigned by a DHCP server: IP Address, Subnet masks, gateway and additional parameters like domain name.
DNS	The Domain Name Service is used to resolve the TCP/IP address from a “user friendly host name”.
Hub	Distributor in a network using the star topology.
IP Address	32-bit address assigned to hosts using TCP/IP. An IP address belongs to one of four classes (A, B, C, D) and is written as 4 pairs separated with periods (decimal point format).
	The IP is part of the socket address. Here IP means Internet Protocol.
SMPTE	Society of Motion Picture and Television Engineers.
MG	Digital Mammography.
Q/R	Query / Retrieve is a service class which provides the ability to retrieve/transfer a well-identified set of images.
Port	Part of the socket address. Different DICOM services on the same host PC may use different port numbers.
Subnet mask	The subnet mask is used to extract network and sub network information from the IP address.
Router	A device that connects different networks. In a TCP/IP environment a router is used to connect computers that are located in different IP address ranges.
Service Class	A structured description of a service which is supported by cooperating DICOM Application Entities, e.g. Storage Service Class.
SCP	Service Class Provider, e.g. a Storage Service Class Provider provides the capability to receive DICOM images from a DICOM AET Storage SCU.
SCU	Service Class User, e.g. a DICOM Storage Service Class User can send an image to a DICOM Service Class Provider.
TCP	Transfer Control Protocol.
UI	User Interface.
USC	Uptime Service Center.
WINS	WINS provides a distributed database for registration and querying dynamic Net-BIOS names to IP addresses.

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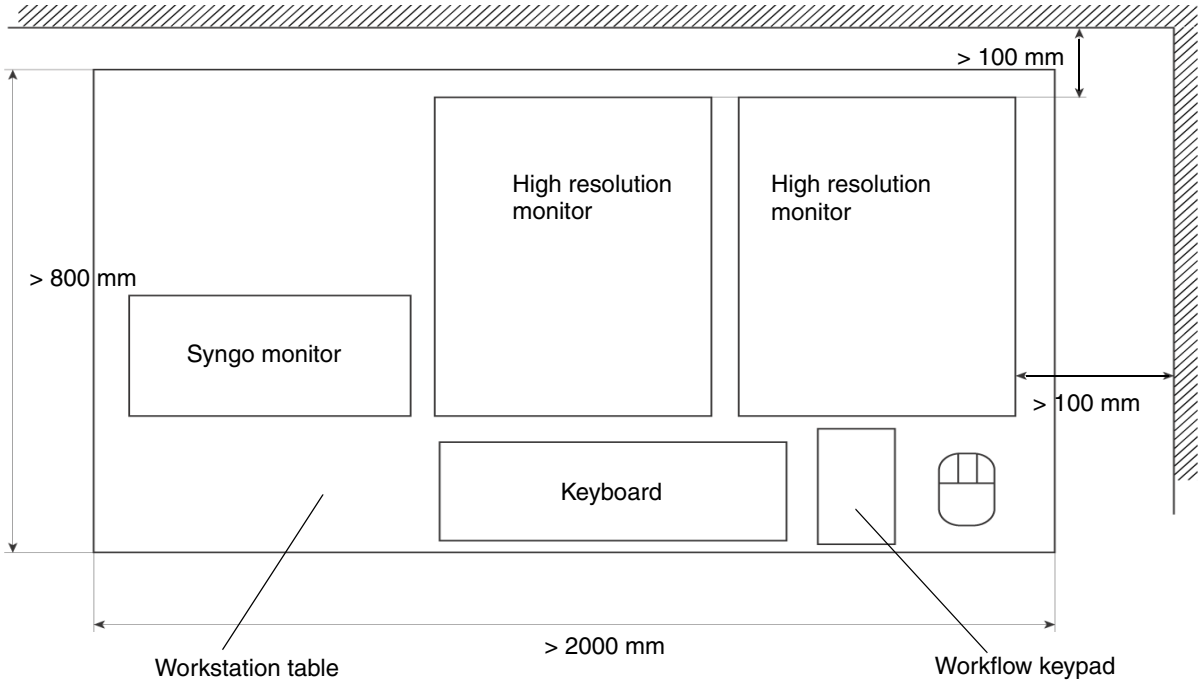
Sample room plan and movement ranges

Room planning example



This example places the PC workstation underneath the workstation table. The room planning should also be prepared so that there are no power cables/transformers adjacent to the monitors. The monitors should also not be closer than 15 cm to other units.

To comply with the requirements of DIN 6868-57 and to provide optimal viewing conditions for diagnosis lighting conditions in the room around the MammoReport^{Plus} need to fulfil certain conditions. This is important to ensure that viewing of especially the darkest grayscale levels is not interfered with.

The MammoReport^{Plus} monitors must be placed to avoid direct illumination and reflections on the monitors from light sources such as windows, lamps and light boxes. When viewing images on the MammoReport^{Plus} the illumination shall come from diffuse light sources and it is recommended that the ambient light level is below 10 cd/m^2. The monitors should also be illuminated as evenly as possible from different directions.

NOTE

For cable lengths, see Page 4 - 1.

The MammoReport^{Plus} should be installed in a room separate from the acquisition system.

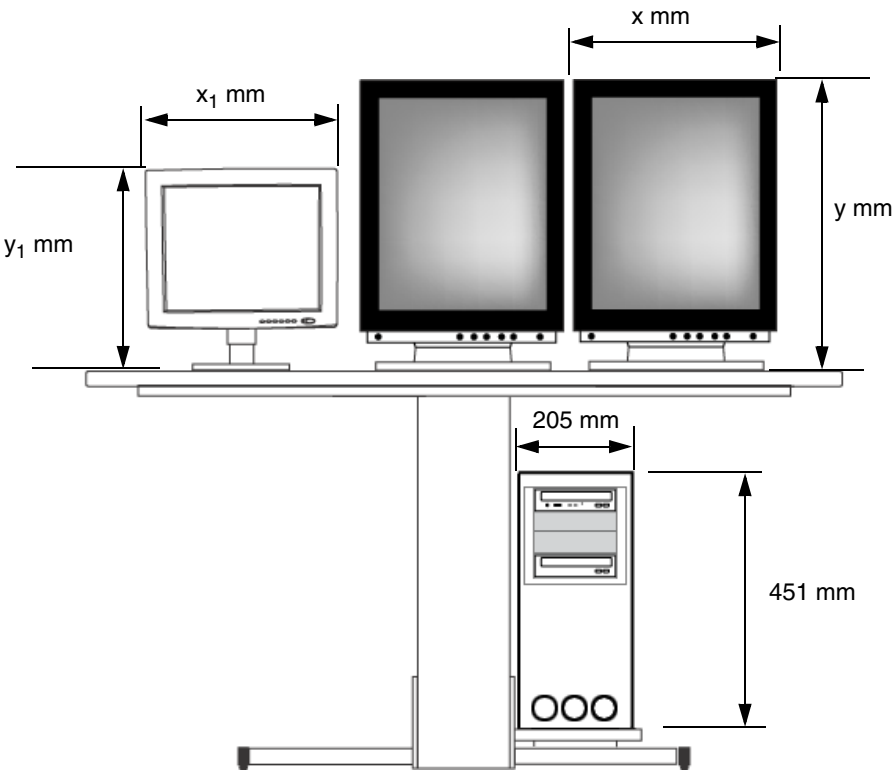
The side table is provided by the customer.

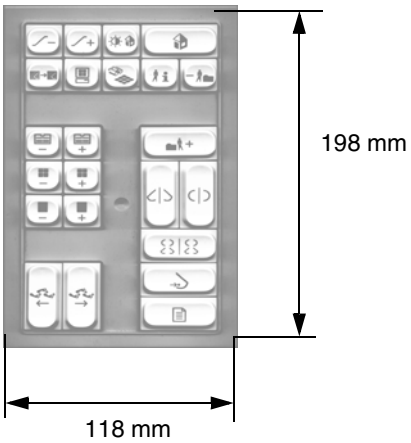
Permissible relative air humidity

NOTE

Make sure that the room environment satisfies the requirements for relative air humidity, see "Heat dissipation data and environmental conditions" on Page 5 - 1. An air humidifier or an air dehumidifier might have to be installed.

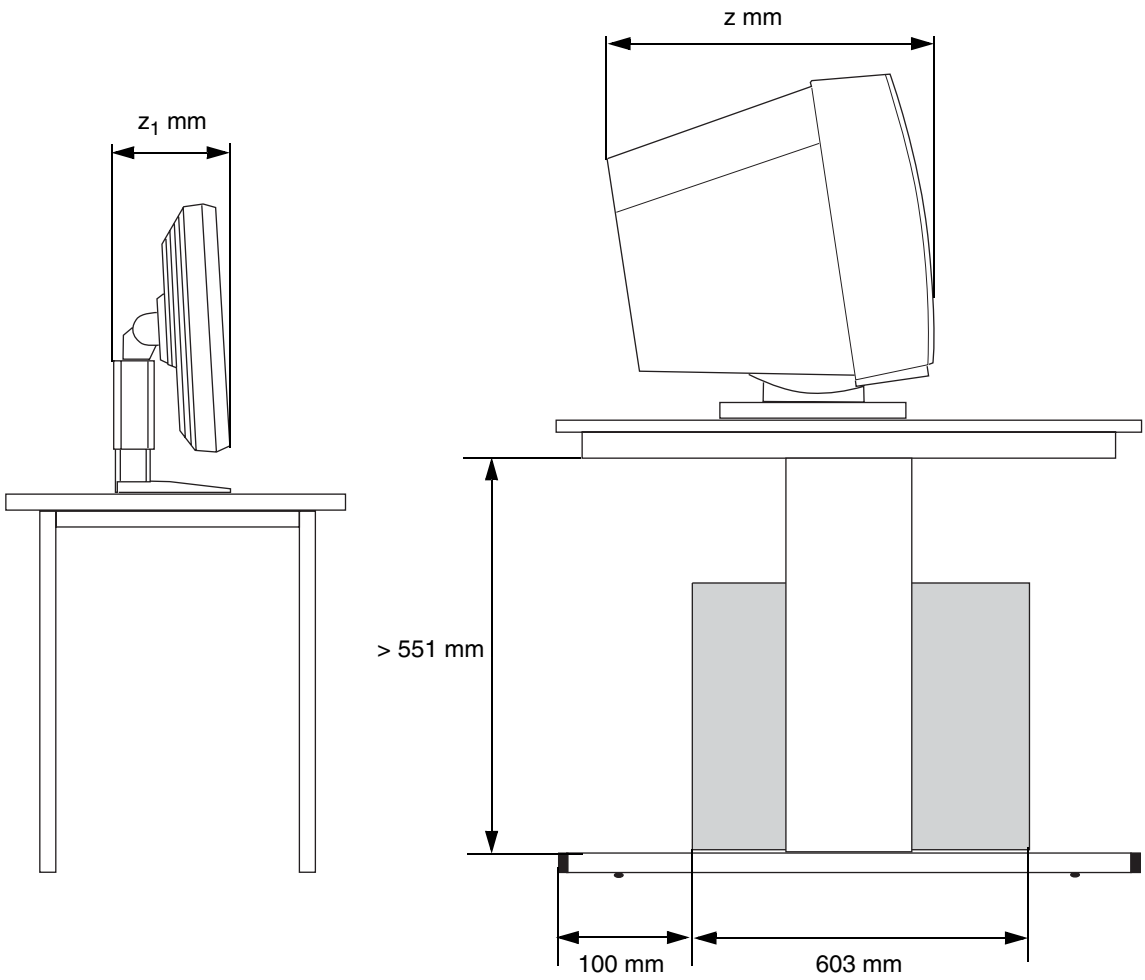
System: Front view





	x resp. x_1	y resp. y_1
SIMOMED SMM21201P (CRT)	403 mm	580 mm
DSB 2103-D-5MP (TFT)	384 mm	521 mm
BARCO MFGD 5621HD (TFT)	408 mm	592 mm
Eizo FlexScan L 557	368 mm	425 mm
Siemens SCD 1897-M	464 mm	430 mm

System: Side view



s

	z resp. z_1
SIMOMED SMM21201P (CRT)	520 mm
DSB 2103-D-5MP (TFT)	263 mm
BARCO MFGD 5621HD (TFT)	217 mm
Eizo FlexScan L 557	198 mm
Siemens SCD 1897-M	240 mm

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NOTE

If additional SIENET components are added or if there is integration into a SIENET network, SHS/PACS P (Project Engineering) must be contacted.

Uninterruptible Power Supply (UPS)

⚠CAUTION

To ensure that no data (patient data, image data) get lost if there is an unstable power supply and to protect the operating system (with all components), we recommend that you install a UPS (see Planning Guide RX98-021.01...).

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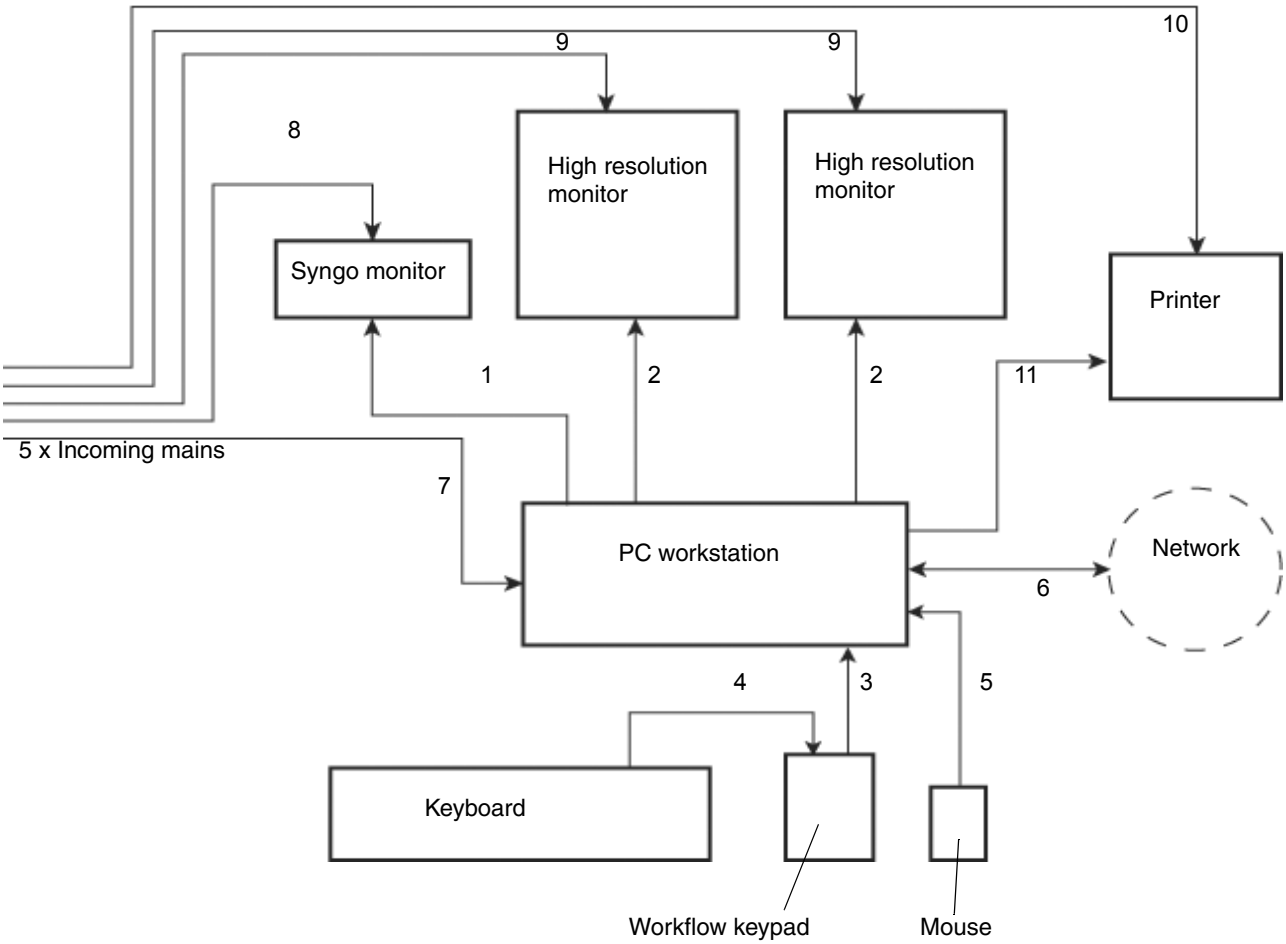
Overview of system connections



Cable length

	Cable between		Length
1	PC workstation	Service monitor	1.5 m
2	PC workstation	High resolution monitor	2 x 2 m
3	PC workstation	Workflow keypad	1 m
4	Workflow keypad	Keyboard	1 m
5	PC workstation	Mouse	1 m
6	PC workstation	Network	30 m
7 8 9 10	PC workstation Syngo monitor High resolution monitor Printer	Incoming mains	2 m 1.5 m 2 x 1.5 m ref. to printer supplier
11	PC workstation	Printer	ref. to printer supplier

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On-site electrical installation

Proposal for building power distribution according to DIN VDE 0107 or national regulations:

	Line voltage	Power line	Current consumption
PC workstation	100 - 240 V	AC 50/60 Hz	8.6 A @ 115 VAC, 4 A @ 230 VAC
Syngo monitor (Eizo)	100 - 240 V	AC 50/60 Hz	0.8 A @ 100-120 VAC, 0.45 A @ 200-240 VAC
Syngo monitor (Siemens)	100 - 240 V	AC 50/60 Hz	1.0 A @ 100 VAC, 0.5 A @ 240 VAC
SIMOMED SMM21201P (CRT)	100 - 240 V	AC 50/60 Hz	2 A @ 100 VAC, 0.8 A @ 240 VAC
DSB 2103-D-5MP (TFT)	100 - 240 V	AC 50/60 Hz	2 A @ 100 VAC, 0.8 A @ 240 VAC
BARCO MFGD 5621HD (TFT)	90 to 264 V	AC 45/65Hz	2 A @ 100 VAC, 0.8 A @ 240 VAC

Heat dissipation data and environmental conditions

	Heat dissipation [kW]	Operation permissible ambient temperature	Operation permissible relative air humidity	Transport and storage permissible ambient temperature	Transport and storage permissible relative air humidity
PC workstation	<0.7	+10- +35°C	20-80 RH%	-30- +60°C	10-95 RH%
Syngo monitor (Eizo)	<0.05	0- +35°C	30-80 RH%	-20- +60°C	30-80 RH%
Syngo monitor (Siemens)	<0.08	+ 5- +35°C	max. 75 RH% at 25 °C	-20- +60°C	max. 75 RH% at 25 °C
SIMOMED SMM21201P (CRT)	<0.2	+10- +35°C	20-80 RH%	-25- +70°C	20-80 RH%
DSB 2103-D-5MP (TFT)	<0.13	5- +35°C	max. 75 RH% at 25 °C	-20- +60°C	max. 75 RH% at 25 °C
BARCO MFGD 5621HD (TFT)	<0.13	0- +40°C	max. 75 RH% at 25 °C	-20- +60°C	max. 75 RH% at 25 °C

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DICOM compatibility

The following table gives a short overview of the products compatible to the acquisition workstation. For more detailed information please check the DICOM conformance statements. The inter-operability with foreign products might be complex and must be clarified before starting the installation.

NOTE

For further information please refer to:

http://www-td.med.siemens.de/Product Information/Planning/General...

DICOM Planning Guide, TDIT-000.891.02... .

	Storage	Q/R	Print	Verification
MammoReport Plus workstation	SCP	SCU	SCU	SCP/ SCU

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Weight specifications

The system will be delivered on 2 standard pallets, weighing approximately a total of 130 kg (with SIMOMED SMM21201P) resp. 90 kg (with DSB 2103-D-5MP).

Component weights and dimensions

	Weight [kg]	Dimension (HxWxD) [mm]
PC workstation	25	451x205x603
Syngo monitor	5.6 (Eizo) ~10 (Siemens)	368x425x198 (Eizo) 464x430x240 (Siemens)
SIMOMED SMM21201P	2 x 33	580x403x520
DSB 2103-D-5MP	2 x 13.3	521x384x263
BARCO MGFGD 5621 HD (TFT)	2 x 13,5	592x408x217
Workflow keypad	-	50x118x198

⚠CAUTION

The high resolution monitors are heavy.

Always handle the high resolution monitors by two persons in order to avoid injuries.

Table weight support

- The workstation table must be able to support a weight according to the weight specifications.
- The side table must be able to support a weight of 6 kg resp. 10 kg minimum (the Syngo monitor).

⚠CAUTION

The supported weight specified for the tables is not valid if other equipment not belonging to the MammoReport^{Plus} system is placed on the tables.

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MammoReport^{Plus} workstation

Parameter	Configuration	Remarks
Local Host (computer name)		Host name of the MammoReport^{Plus} workstation. Do not use more than 10 characters and no special characters
IP address Subnet mask		Host address and subnet mask
IP Gateway(s) address		IP addresses of the router
Own DICOM AE title:		The AET name must be unique in the network. Usually the AE title is set to the host name (upper case is recommended)
Port no.		
SCR AET SCR Port no.		only used for CAD SR

Tab. 1 MammoReport Plus workstation data sheet.

DICOM conformance statements

The necessary DICOM conformance statements must be available. Check the Interoperability Database for additional information:

URL:www-td.med.siemens.de. Collection: Product Information/DICOM.

Did you check the Interoperability Database?	☐ Yes	☐ No
Did you check the Conformance Statements?	☐ Yes	☐ No

DICOM Printer

Parameter	Configuration	Remarks
Manufacturer		
Model		
Host name		
TCP/IP address		
Logical name		
DICOM AE title:		
Port no.		
Dmin		
Dmax		

Parameter	Configuration	Remarks
Film size [pixels]	Portrait: Landscape:	

Tab. 2 DICOM printers data sheet

Acquisition workstation

Parameter	Configuration	Remarks
Host name		
IP address		
DICOM AET		
Port no.		

Tab. 3 Acquisition workstation data sheet

CAD workstation

Parameter	Configuration	Remarks
Host name		
IP address		
DICOM AET		
Port no.		

Tab. 4 CAD workstation data sheet.

DICOM archive server / PACS

Parameter	Configuration	Remarks
Location		
Archive manufacturer		
SW version		
Logical name		This is the name as it will appear in the DICOM setup user interface
Host (Node) name		
IP address		Not necessary if a DNS or WINS name resolution is available

Tab. 5 DICOM server data sheet

Parameter	Configuration	Remarks
DICOM: General AET Port no.:		
Storage AET Port no.		If applicable
Query/Retrieve AET Port no.		If applicable
Query/Retrieve IM AET Port no.		If applicable
Verification Port no.		If applicable
Data model:		Patient root or study root

Tab. 5 DICOM server data sheet

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Chapter	Page	Change
	0-2	Add Coronis and MediCal Pro
1	1-2	Changed first bullet
2	2-2	Add Barco to table
2	2-3	Add Barco to table
5	5-1	Add Barco to table
7	7-1	Add Barco to table

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